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United States
Department of
Agriculture

Forest
Service

Intermountain
Region

Ogden, Utah

INTERMOUNTAIN REGION ANNUAL FIRE REPORT 1989

INTERMOUNTAIN REGION
1989
FIRE REPORT

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1989 FIRE SEASON

The 1989 Great Basin fire season was similar, in a lot of ways, to the 1988 fire season. Total acreage burned in 1989 was 176,142, the second largest acreage figure since record keeping began in 1930. That figure is second only to the 550,000 acres which burned in 1988. As in 1988, the drought pattern continued over much of the region. Also as in 1988, lightning continued to be the main ignition source. About 95,000 acres were burned as a result of a July 26 storm on the Payette and Boise National Forests. The drought-dried fuels of the Great Basin were significant contributing factors to the number of acres burned.

As a result of social and political concern stemming from the 1988 fire season, the Forests were directed to review the prescribed fire management portions of their Wilderness Plans and submit them for approval. No plans were submitted or approved for the 1989 Great Basin fire season, so all fires were wildfires.

The U.S. Army was used extensively for suppression activities in the Yellowstone area in 1988. In 1989, two Batallions of U.S. Army and one squadron of military Blackhawk Helicopters were mobilized to fight fires in the Intermountain Region portion of Idaho. The twelve-hundred people in the Batallions came ready and willing to help, and provided a needed and very welcome service. The Blackhawk Helicopters in the squadron were used to carry people and cargo. Soldiers and equipment began arriving August 4th, and demobilization began August 19. In addition to the helicopters attached to the Squadron, there were helicopters in use which were attached to the Batallions.

Urban-wildland interface fire management challenges have been increasing throughout the 1980's as homes and other structures are built in wildland settings. Protecting these structures from wildland fires takes a major effort. Homes were threatened by fires on the Dixie and Ashley National Forests. The historic mining town of Warren was threatened by fires on the Payette National Forest. Fifteen homes were burned near the Boise National Forest when fire burned through the town of Lowman.

The Great Basin received help from 43 states, and records were set in three areas--gallons of retardant, helicopter use hours, and smokejumper jumps. No firefighter fatalities occurred in the Great Basin, and no life threatening injuries were reported. Fire shelters were not deployed. There were, however, three helicopter "accidents with potential" resulting in damage to aircraft and necessitating accident investigations.

Other significant fire related events in 1989 include the establishment of a Multi Agency Coordinating Group (MAC), and a visit by the Chief of the Forest Service to the Boise and Payette National Forests.

The MAC group was formed at McCall on July 27th and was charged with determining which scarce resources would be sent to which fires on the Boise National Forest, the Payette National Forset, State of Idaho lands, and lands of the Southern Idaho Timber Protection Association. The MAC Group disbanded August 12.

Chief of the Forest Service F. Dale Robertson toured the Boise National Forest on August 18th, and the Payette National Forest on August 19th.

Acreage burned summary as of August 27:

--The number of lightning-caused fires has increased roughly 159 per cent over the five-year average. The five-year average is 869 per year, while 1989 saw 1,383.

--The number of person-caused fires decreased by roughly 14 per cent of the five-year average. The five-year average is 291 fires, while 1989 saw 255.

--The total number of fires is 1,638. This is 141 per cent of the five-year average of 1,161 fires.

--The acreage burned by lightning-caused fires increased by about 10 per cent of the five-year average. The five-year average is 146,551 acres, while 159,740 acres have burned in 1989.

--The acreage burned by person-caused fires decreased significantly in 1989 compared to the five-year average. The five-year average is 53,155 , and the 1989 acreage burned is 16,402.

--The total acreage burned is 65 per cent of the five-year average. The five-year average is 208,748 acres, while the 1989 total is 176,142. The only single year with more burned acreage than 1989 is 1988, with 550,181 acres burned.

--The twenty-year average for total acreage burned is 73,802 acres.

--The fifty-year average for total acreage burned is 45,215 acres.

--At the peak of the fire season 13,743 personnel from virtually every Forest Service Region and cooperating agency in the United States were on wildfires on the Payette and Boise National Forests.

--Southern Idaho delivered 1,320,000 gallons of retardant to wildfires.

--1989 showed a record year for the number of fire jumps. The Mccall base smokejumpers made 939 fire jumps. At one time the Mccall base had 167 jumpers of which 69 were based there.

1989 FIRE AND WEATHER SUMMARY

ASHLEY NATIONAL FOREST

The Ashley National Forest had a severe season in terms of acres burned but a below average fire occurrence with 41 fires. The number of acres burned was 9,903 which was higher than last year's 6,317 acres. This year, the Ashley experienced three project fires at the same time. Two of the fires occurred on the Duchesne Ranger District and the other on the Roosevelt Ranger District.

Drought condition, which continued locally through the winter, added significantly to the early summer fire season.

The first fire on the Ashley for the 1989 season occurred on April 10, burning 3 acres of grass in a ponderosa pine stand. Fires continued to occur throughout April and May. Although the acreage was not significant, the fact that the Ashley was discovering fires all over the Forest, projected a severe fire season was to be expected unless significant moisture came. The late spring and early summer weather produced insignificant rain but created tremendous thunderheads and dry lightning daily at lower elevations. Other local agencies were experiencing project fires starting the beginning of June which impacted initial attack resources on the Ashley.

On June 29, 1989, the Rough Canyon fire was started by lightning. Due to the tremendously steep terrain, access to the fire was extremely difficult. Helicopters were necessary for the deployment of resources over the entire fire. The fire was controlled at 2,450 acres; 1,280 on the Ashley and 1,170 on State and private land.

The Six Mile fire started on July 3, 1989, prior to the containment of the Rough Canyon fire. It was lightning caused also. It burned 1,950 acres of wildlife habitat, range, and watershed resources. All of the acreage was under the jurisdiction of the Ashley.

The Uinta Canyon fire started on July 3, 1989 also. It burned 5,480 acres of timberland, making this fire the highest priority for the Forest.

BOISE NATIONAL FOREST

Due to drought conditions of preceding years the Boise National Forest experienced one ot the worst fire seasons on record.

Dry thunderstorm occurrence was above normal and resulted in 290 lightning caused fires, which was 123 more than the average.

From mid-July on, the Boise National Forest was totally committed to fire suppression activities on the forest. The storm that started over 90 fires on July 21 overloaded their ability to keep them all small and several of those fire went to project.

There were two major complexes on the Boise National Forest last summer. The Lowman complex which burned 42,000 acres, and the Warm Lake complex which burned 23,550 acres. At the peak of these fires there were over 5,443 personnel committed on the Boise National Forest.

The Idaho National Guard was mobilized in Idaho to support the fires on the Boise & Payette National Forests. They provided troop hauling, shower units, water purification and infrared imagery. In addition to the National Guard the Regular Army was mobilized with a battalion at Warm Lake and a helicopter company based at Cascade.

BRIDGER-TETON NATIONAL FOREST

The 1989 fire season was near normal for the Bridger-Teton National Forest following a winter of near to slightly above normal snowfall. The spring and summer weather produced near normal conditions with the exception of a period in early July when the largest fire occurred. While weather conditions through the fire season were near normal the forest again was in moderate to extreme drought conditions. The winter, spring, summer and fall moisture conditions were such that they at times slowed fire spread but they didn,t restore soil moisture or decrease 1000 hour fuel moisture deficiencies. Actual measurements by oven drying in September and early October of 1000 hour fuels indicated moistures were between 5-14%.

All of the dead woody fuels were extremely dry during the fire season. The thousand hour timelag fuel readings were again some of the lowest ever recorded for the forest. One thing that did help was that the grass/forgs remained green and did not carry fire even with the high winds until mid-August; so ground spread of fire was limited to the woody fuels in the tree stands until mid-season when the grasses would carry fire if they were exposed to heating or high wind. As a result, fires that grew did so by spotting unless the dead down woody fuel was continuous enough to allow ground fires to spread.

The first lightning fire was in July and the last one in September with 27 fires in between those two. There were several fires which were reported that they were unable to find with initial attack forces. We felt this was due to the inordinate amount of moisture which accompanied the lightning storms this year. Precipitation was heavy from those storms though spotty in overall coverage.

The number of fires was well within the range considered normal; however, the acres burned exceeded all years within the last decade except for 1988. This large acreage appears to closely follow what could be a 20 year event which would only happen when the forest is experiencing extreme drought conditions. This year the forest experienced 2 project fires that required overhead teams; this is roughly twice the forest's normal project fire

occurrence. On our largest fire, Ann's fire, we had great difficulty obtaining requested resources due to the fire activity in Idaho. Ann's fire was extinquished by torrential rainfall which even flooded out the base camp.

CARIBOU NATIONAL FOREST

The fire season was advanced in 1989 as it was in 1988 by at least one month or more. Early warm, dry temperatures accounted for an unseasonable spring drought as was previously witnessed last year.

The Caribou National Forest had 21 fires for a total of 7.5 acres. However, neither of the figures are indicative of the weather, severity, or activity during 1989. The weather and fire danger ratings were much higher than 1988 with 1000 hour fuel moisture contents being in the single digits as early as June, the lowest recorded in several years. In addition, they supplied significant numbers of personnel and equipment in support of fire suppression activities for going fires in the Region (20 man-crews, camp crews, overhead team members, etc.).

Forest personnel recognized early that the fire danger would be high during 1989. As a result, the fire prevention, detection, initial attack and suppresssion crews were organized and thoroughly trained early in the fire season. Initital attack and suppression crews were placed on alert status during high fire danger periods. Prevention and detection personnel concentrated on public contacts throughout the fire season.

Although we had no need for mutual assistance this year (1989) we still feel the strength of the Gateway Interagency Fire Front (GIFF) is steady increasing, both in terms of cooperation and mutual assistance stand point.

Planned prescribe burns went as planned in the fall of 1989, but most were small slash piles and all burns were done after fire danger ratings had been reduced by inclement weather.

CHALLIS NATIONAL FOREST

The Challis National Forest with below normal snow and precipitation amounts and above normal Condition Classes, experienced the same type of fire weather as the rest of the Western United States. Fires had erratic fire behavior and high rates of spread.

The Forest had an above normal fire occurrence of 84 fires. The 70-79 average was 47.3 fires per year. Acreage was also above average with 1,531 acres. The 70-79 average was 451.6 acres per years. The Forest was very lucky in only having observed lightning on 12 days and not the 70-79 average of 29 days, two lightning storms on the 20th, and the other on the 26th of July were responsible for starting 51 fires, almost seventy percent of the

72 that were caused by lightning. Also the person caused fires were down to 12 from the 15.8 average.

Inside the Frank Church Wilderness the Forest had 41 fires for 115 acres, suppression action was taken on all 41 fires inside the wilderness area.

The Forest also was a big supporter of, off forest dispatches during the fire season, with 83 people off forest for 759 person days. The Forest helicopter also spent part of the summer on off forest assignments.

DIXIE NATIONAL FOREST

Drought conditions continued into 1989. Very little snow pack and sparce rain fall in the spring resulted, in a major increase in fire activity on the Dixie National Forest. All fire ignitions demanded immediate response, and with the heavy fire activity on the BLM and National Parks around the Forest, fire suppression was stretched to its limit.

The 1989 fire season started with its first fire on March 24th, two months earlier than normal. Dry conditions prevailed throughout the summer with the largest fires on the Cedar City Ranger District. (Uinta Flat at 7800 acres and Sandy Peak at 850 acres).

The fall months were characterized much the same as the summer keeping our few fire personnel very busy with the Person caused fires that resulted because of the many big game hunting seasons that we have in Southwestern Utah.

In summary not only was it a very hard year for the Dixie National Forest because of their own fire problems, but they were stretched because of the support that was given to the region in personnel going to the fires in Idaho.

FISHLAKE NATIONAL FOREST

The 1989 fire season was active and above normal. The 61 wildfires experienced on the Fishlake National Forest were slightly less than the 68 wildfies of 1987, but an increase over the 46 of 1988, and represents a continued increase in wildfire activity.

Beginning in mid-April a series of lightning storms with high activity started the fire season and continued to be heavy until the first half of October. As a result of the high lightning activity the National Forest experienced 10 days of multiple ignitions resulting in the extensive use of interagency cooperation. Average temperatures during the summer were in the low 100's with resulting relative humidities in the single digits, with fairly consistent winds at 10 to 15 mph.

Total precipitation was below normal for the fourth year in a row.

HUMBOLDT NATIONAL FOREST

The Humboldt experienced a mild fire season in 1989 with 22 fires and 4,270 acres burned. The storms which passed through the area were accompanied by precipitation. Rainfall was greater this season than in the last several seasons with milder temperatures.

The 1989 fire season began on June 9th and ended November 16th with the first and last fires. The Santa Rosa District again lead the Forest in the most acres burned with 2 arson caused fires totaling 4049 acres. The Ely District had 12 fires totaling 18.7 acres, the Mountain City District had 7 fires with 202.3 acres, the Ruby Mountain District had 1 fire at .3 acres and the Jarbridge District did not have any reported fires.

Beginning in June and extending into July the Jarbridge District hosted the Rainbow Gathering. The logistics for the Gathering went well and proceeded without any major incidents.

MANTI-LASAL NATIONAL FOREST

The Manti-Lasal National Forest had 73 fires during the 1989 fire season. Four fires were human-caused for .4 acres and 69 lightning-caused fires for 130 acres, for a total of 130.4 acres burned.

The woods were dry this spring with below normal winter moisture. As a result, the Forest experienced 38 fires in the month of July for 40 acres burned, and 20 fires in the month of August. The wet weather did not come in July as in the past.

The Manti-Lasal National Forest supported fires in Region 4, with overhead miscellaneous support people, totaling 65 people, and 120 unemployed people from the Carbon and Emery County, as AD casuals (camp crews).

PAYETTE N.F.

The Payette National Forest appeared to rebound from a four year drought condition with a slightly above average precipitation record for the 1989 fire season. However, several years of average or above moisture is needed to recover dead as well as live fuel moistures to an average, normal level. A lightning storm passed through the Forest on July 26 and lightning detection equipment indicated over 1,000 strikes per hour over central Idaho. As a result the Payette experienced around 250 fire starts in one day. Fire intensities increased dramatically on July 29 as unstable air and low humidities caused many of these fires to escape. August returned to normal precipitation allowing crews to get a handle on the thousands of acres ablaze on the Forest.

A Mac group was established on the Forest to set priorities as resources were stretched to the limit. The group delt with fires on the Payette and Boise Forests as well as the State of Idaho, diverting resources sent to the Payette to priority fires in all areas.

The Payette Dispatch office and Expanded Dispatch were inundated with requests from the Forest, State and BLM as crews and overhead scrambled to contain blazes throughout the Forest and adjacent lands. Overhead Teams were assigned complexes, FMO's and AFMO's were handling hundreds of fires, National Guard troops were on the fire line and Wilderness Teams advised the Forest on conditions in the Frank Church Wilderness as the Forest managed a very complex and intensive multiple occurrence situation.

When the smoke finally settled, the Forest survived a record number of fires with the aid of a record number of support personnel for an acreage figure that nearly reached 40,000 acres.

SALMON NATIONAL FOREST

The winter of 1989 was above normal temperatures with below normal precipitation and snowpack totals.

During the month of May rainfall was 93% above normal, dropping to 57% below average precipitation in June. The rest of the summer and fall was below average. The total rainfall May through October was 20% below average. The 30 year average dropped 21% below average.

Fire occurrence was above normal for the 1989 fires season with 133 fires. This exceeds the thirty year average by 71 fires.

Fire acres burned during the 1989 fire season was 1,377 acres, decreasing 75% below the last 30 year average.

SAWTOOTH NATIONAL FOREST

The fire season on the Forest started with weather and fuel conditions indicating a potentially severe season. The June and July ERC's indicated the established Savlin study dates were met, and we could expect an above average season. ERG's reached very high conditions by early July reaching extreme in late July and continuing through August. Measurable rain was received in late August and some additional rain in September which reduced the fire danger. The Forest experienced a moderate drought with severe fire weather condtions, and abnormally high lightning occurrence. The fire season was officially over on October 7, with the last fire occurring on October 23. The fire was incendiary caused. The fire season ended with snow and rain, which provided very good conditions for our prescribed fire program.

Lightning storms occurred from mid-June through September, with ten fire-causing storms for the summer. This year was one of the highest on record for lightning occurrence, with 36 lightning fires in a 10-day period. Person caused fires were down this season because of aggressive initial attack.

TARGHEE NATIONAL FOREST

The winter of 1988-1989 started out with 150% of normal snow fall in the early months. At winter's end precipitation averages across the Forest were very near normal for the first time in three years.

During the regular fire season months of June through September, Swan Valley recorded the least amount of precipitation with only 3.45 inches. Lack of moisture during April contributed to early curing of fine fuels across the Forest. Thousand hour fuels started out higher than the fire season of 1988, but dropped at a much faster rate than normal.

This fire season the Targhee had 11 human caused fire; this number is about 75% less than last years total and 50% less than the 5 years base period. Fire danger was high to extreme during the recreation months, but an increased public awareness helped keep the human caused fire to a minimum. District efforts contributed greatly to this with their fire prevention programs for the public. Other contributing factors may have been increased media interest in fire suppression activities and heavy media coverage of the North Fork fire trial.

TOIYABE NATIONAL FOREST

On the Toiyabe there were strong signals of an early and severe fire season when winter precipitation vanished in March and April and temperatures were setting record highs. The area was experiencing its thrid year of drought. A wet May and early June put the fire season temporarily on hold which was welcome news. However the rainfall and warmer temperatures during the period produced a healthy growth of grasses and other fine fuels. By the middle of June the Forest started getting lightning with resulting fires. There was an average number of person caused fires on the fores and above average number of lightning caused fires. Acreage burned on the Forest was below the annual average and was due to efficient initial attack and heavy utilization of local cooperating agencies. By mid-September, moisture from Hurricane Octave mixed with a cold upper trough bringing moderate rains and some snow to the northern districts dealing a blow to the 1989 fire season.

UINTA NATIONAL FOREST

With 1987 and 1988 being years of drought and below average precipitation, the 1989 year began dry. Below normal precipitation in 1989, particularly in the spring helped to

create a severe fire danger situation which included very low fuel moistures, erratic fire behavior and other problems.

The extreme fire behavior became evident with the Cliff fire on 8/14/89.The fire itself was a small lightning caused fire and crews were dispatched to take care of it. The crew worked the small fire and left it in a safe condition. The next day a crew returning to check the fire found it to be still burning and began to work it. A gust of wind came up and caught the fire. It burned so rapidly that some gear which had been placed 150 yards away was burned as the crew escaped. This all occurred on a north facing slope. The resulting fire consumed 36 acres of steep terrain and involved closing the road to Timpanogos Cave National Monument.

WASATCH-CACHE NATIONAL FOREST

The 1989 fire season for the Wasatch-Cache National Forest was below normal from a standpoint of fires and acres burned.

Compared to 77 fires during the 1988 season, the Forest had 47 fires, with the first fire starting June 5th. The Forest burned 1,162 as compared to 11,255 acres in 1988.

On August 2nd 16 Smokejumpers were ordered for the Shingle Creek fire. The weather was too windy so they returned to Ogden. They tried again on the third but it was still too windy, so they landed at Heber airport and were driven to the area and hiked in. They flew out on August 4th for McCall.

The Causey fire, which started September 5th, at 1400, on the Ogden Ranger District, burned 604 acres and was the largest fire on the Forest.

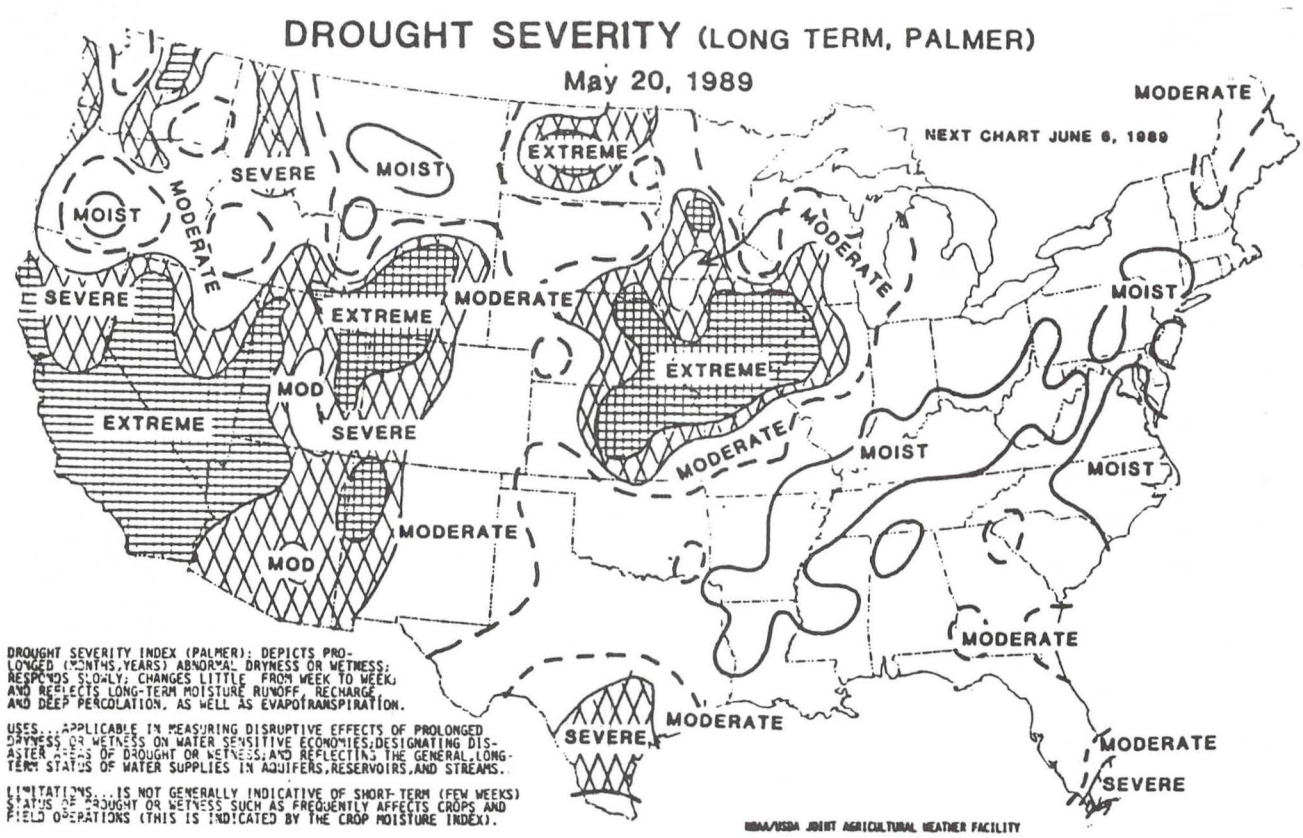
During the 184 day period, the temperature was 90 degrees or better only 15 times as compared to 55 times last year. The highest temperature was on July 27th when it reached 104 degrees. For the 5 month period beginning in June the Ensign Weather Station recorded 2.33 inches of precipitation as compared to the normal of 4.71 inches.

On the 10th of July, stage II fire restrictions were in effect on all National Forest lands, all Bureau of Land Management lands and all State or privately owned wildlands within the State of Utah due to the dry conditions. Due to the rainfall and reduced fire danger, the order was rescinded on August 10th.

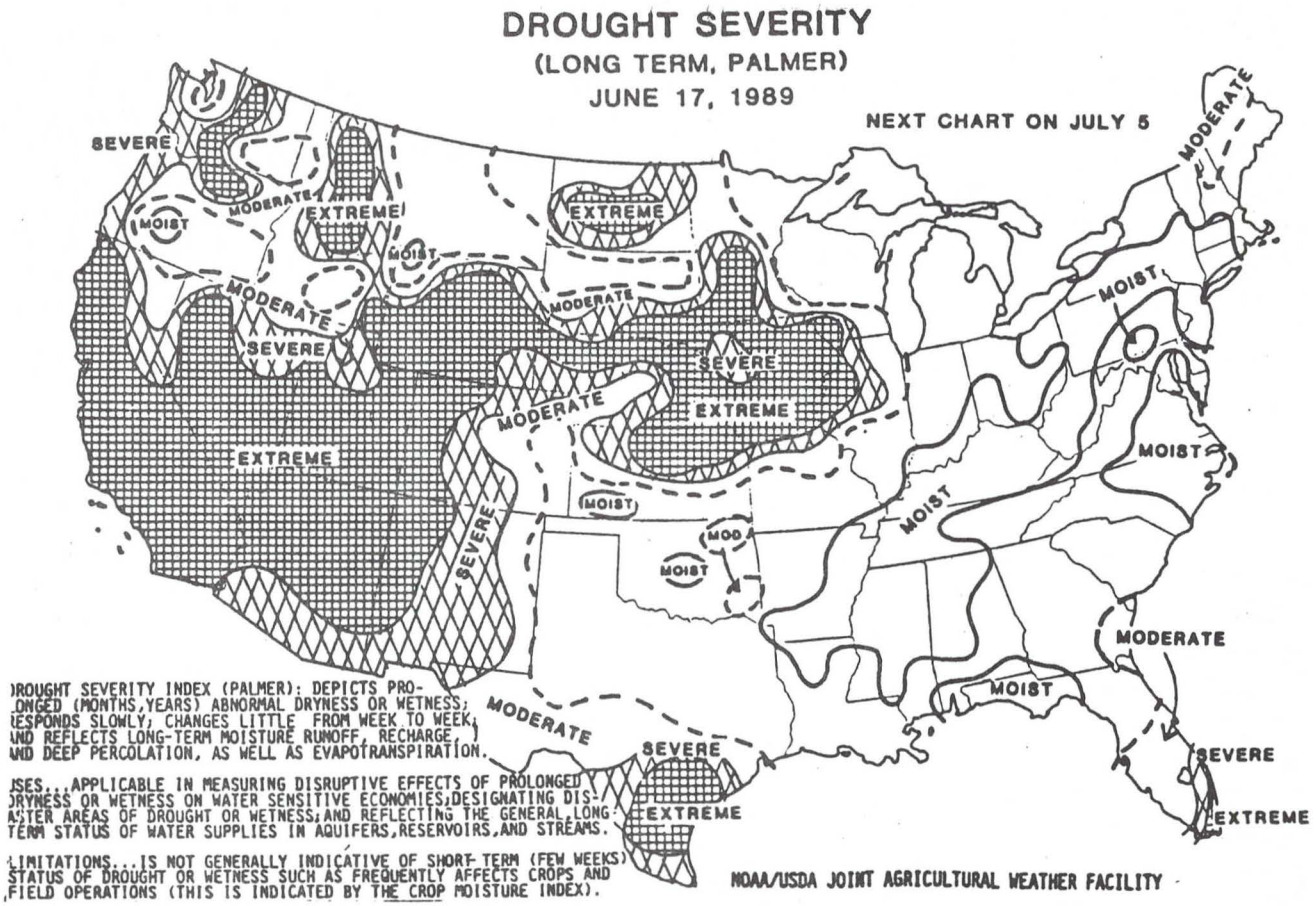
FIRE WEATHER SUMMARY

The winter of 1988-1989 began extremely wet with record November rain and snow. December, January and February were relatively dry, but March turned very wet again. April 1st snowpacks were near to slightly above normal. Percentage figures ranged between 85 and 120 percent of normal. Warm, dry weather during April and May resulted in the melting of the snowpack about 2 weeks earlier than usual. Although winter precipitation was more abundant than the past 2 years, little if any improvement was noted in the long-term drought situation. The Palmer Drought Severity Index still showed much of central and southeastern Idaho, Nevada,Utah and southwestern Wyoming, in a severe to extreme drought (figure 1). A mild drought was indicated across the Snake River Valley in southern Idaho. The only significant improvement was noted in Yellowstone NP where moist conditions prevailed.

(Figure 1)

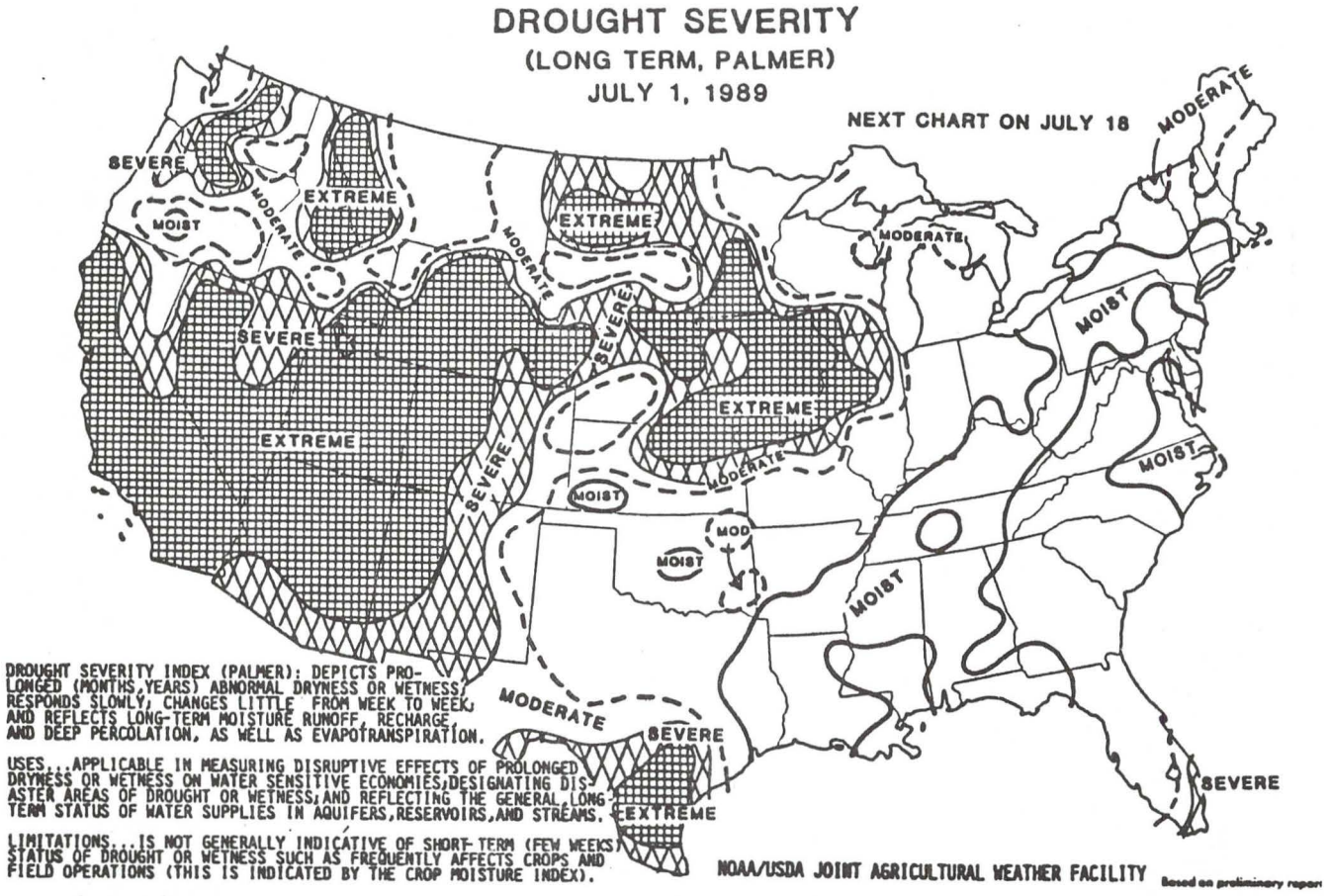


June remained warm and much drier than normal as strong high pressure dominated the Great Basin and the Rocky Mountains. As a result, the areas of extreme drought in central and southeastern Idaho and in southwestern Wyoming expanded in size (figure 2). Between 6 and 8 inches of rain above the normal was needed in these areas to break the drought.



(Figure 2)

July was a transition month for eastern Idaho and western Wyoming with hot, dry weather gradually being replaced by periodic surges of wet thunderstorms throughout the month. Temperatures in the 90s to over 100 degrees and humidities less than 10 percent were noted on a number of days. The most significant event of the month occurred July 26th when a severe dry lightning storm blasted western and central Idaho. Lightning detection equipment recorded over 1,000 strikes per hour throughout the day in Idaho, resulting in hundreds of new fire starts. Particularly hard hit were the Payette and Boise National Forests. Another significant weather day was July 29th, when unstable air and extremely low relative humidities caused many fires to blow-up, burning thousands of acres and threatening a number of small communities.


DROUGHT SEVERITY
(LONG TERM, PALMER)
JULY 1, 1989
NEXT CHART ON JULY 18
SEVERE
MODERATE
MOIST
EXTREME
DROUGHT SEVERITY INDEX (PALMER): DEPICTS PROLONGED (MONTHS,YEARS) ABNORMAL DRYNESS OR WETNESS; RESPONDS SLOWLY, CHANGES LITTLE FROM WEEK TO WEEK; AND REFLECTS LONG-TERM MOISTURE RUNOFF, RECHARGE AND DEEP PERCOLATION, AS WELL AS EVAPOTRANSPIRATION.
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NOAA/USDA JOINT AGRICULTURAL WEATHER FACILITY

The first break in the weather came to western Idaho on August 2nd when a cool front brought clouds and much higher humidities. A much stronger low pressure system moved into Idaho August 8th, bringing significant precipitation to the entire area. This system essentially stopped the spread of the large fires on the Payette and Boise NFs, allowing firefighters to gain the upper hand. The remainder of August was dominated by a series of low pressure systems that moved in from the Pacific Ocean across Idaho and into Montana.

Listed below are the major factors that contributed to this year's fire season.

1. The continuing drought, which entered a third year in most areas.
This not only resulted in extremely low dead fuel moisture, but live fuel moisture as well as many trees and scrubs continued to show stress due to the lack of moisture.

2. Although the snowpack was near to a little above normal, it melted 2 weeks earlier than usual, advancing the summer season in the high country.

3. Very dry weather during April and May stunted the growth of grass on BLM land. This served to temper the intensity and growth of fires during the summer, even though the number of lightning starts was up this year.

4. Western Idaho experienced a hot, dry July and the lightning bust on July 26th ignited hundreds of fires on the Payette and Boise NFs and a lesser number of fires on the Challis and Salmon NFs.

5. Finally, and most importantly for eastern Idaho and western Wyoming, a return to normal summertime precipitation in July and August wet the fuels enough to significantly decrease the threat of large fires.

SPECIAL FORECASTS AND SERVICES

There were 331 spot forecasts issued between March and November 1989. This included 139 forecasts for wildfires (excluding on-site mobile unit forecasts) and 192 for prescribed burns and other land management activities. The 331 figure compares with the five-year average (1984-1988) of 266 spot forecasts. The number of spots for wilfires was down from last year, primarily because eastern Idaho and western Wyoming had a more normal fire season.

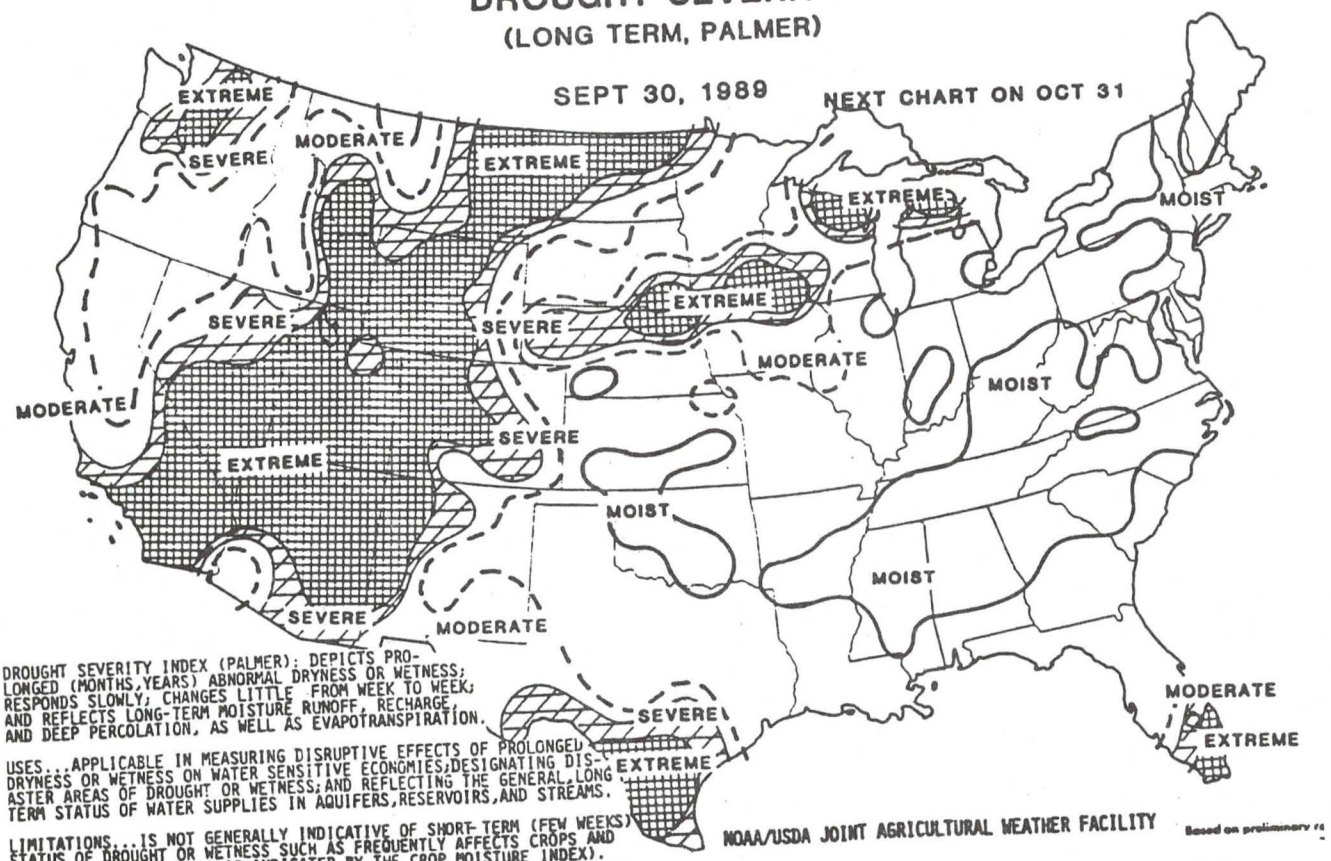
Red Flag Watches are issued to alert the fire control agencies of the potential of severe fire weather. Red Flag Warnings indicate that severe fire weather is imminent. Severe fire weather usually means dry thunderstorms and or strong, gusty winds in conjunction with very high to extreme fire danger. Four Red Flag Watches and ten Red Flag Warnings were issued this year. Most were issued in July for dry lightning.

Boise fire weather forecasters spent a total of 54 days in the field this fire season. The first dispatch was to Ann's Fire on the Bridger-Teton NF between July 5th and the 11th. The next dispatch was to the Uinta Fire on the Dixie NF in Utah July 16th to the 21st. The Lowman fire, on the Boise NF, was manned by a Boise forecaster between July 28th and August 19th. Boise forecasters were also on the Warm Lake and Foolhen Complexes. Other forecasters from Oregon and Washington were utilized on the Steamboat and Partridge fires on the Payette NF.

DROUGHT SEVERITY
(LONG TERM, PALMER)

SEPT 30, 1989

NEXT CHART ON OCT 31



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NOAA/USDA JOINT AGRICULTURAL WEATHER FACILITY

Based on preliminary re

COOPERATIVE EFFORTS

The **Ashley National Forest** cooperative agreements with the Uinta Basin Wildland fire control agencies which include the Bureau of Indian Affairs, the Bureau of Land Management, Dinosaur National Monument, and Uintah, Daggett, and Duchesne Counties continues to work well.

The agreement with the Rock Springs BLM was continued with the Flaming Gorge Ranger District, authorizing the District to take initial attack action in the Little Mountain area in order to reduce the response time in this high resource value timber.

Interagency cooperation in the suppression of fire in Southwestern Utah has once again proven itself. The cooperative Dispatch office handled 103 National Forest fires, 92 Bureau of Land Management fires, 32 National Park fires and assisted in 7 Utah State Lands wildfires.

The four Color Country Crews were once again manned by the **Dixie National Forest**, North Kiabab District of the Kiabab National Forest, Zion Canyon, Bryce Canyon, Capital Reef National Parks and Glen Canyon National Recreation areas, plus Cedar City District and Arizona Strip District BLM. 40 young men were trained from the Navajo Nation to form one of the crews.

The Alpine Hotshots are a well trained National Park crew dispatched by the cooperative dispatch office at Cedar City. It works well with all agencies involved.

Interagency cooperation continues to work well with the **Fishlake National Forest** and the Richfield BLM. Each agency provided one Lead Dispatcher and one Assistant Dispatcher to the organization. Through shared responsibilities, dedication to making the office work, and personal committment, Richfield Interagency Dispatch Office functioned with a high degree of efficiency and productivity. Morale was high and much was accomplished.

The Closest Forces agreement was extended to all agencies and the BLM, Utah State Lands, Sevier County, and Millard County Volunteer Fire Departments were called several times to provide initial attack to both Forest and BLM fires. The Forest reciprocated by providing initial attack to State and County lands.

The Humboldt National Forest, Nevada Division of Forestry and Bureau of Land Management completed a 5th season in the Elko Interagency Dispatch Center.

The contract with the Nevada Division of Forestry for initial attack on the Jarbidge, Mountain City and Ruby Mountain Districts continues to work well.

Four Conservation Camps have been a valuable resource for the Humboldt. They are part of the Nevada Prison System.

All logistics requests were channeled through the Nevada Coordination Center.

The Duck Valley Indian Reservation Crews are taking responsibility for their crew representative positions.

The Payette National Forest managed three fires for a little over 3,000 acres of BLM ground through the Mutual Assistance Agreements with the Bureau along the Snake River.

The Forest agreements with Rural Fire Departments were tested again with outstanding success.

At the peak of the season, the Payette hosted over 8,300 personnel from virtually every Forest Service Region and cooperating agency in the United States on wildfires on the Forest or with cooperators. In addition 984 military personnel from the National Guard and Regular Army units were assisting in support with 550 of those actually on the fire line.

The Region 1 Fire Cache is of great value to the **Salmon National Forest** by being only about three hours away. Air tankers, smokejumpers and crews from Region 1 were also used.

The Salmon BLM, and Salmon National Forest Fire Cache has been working very well. This is the third operational year.

Cooperation between the **Sawtooth National Forest** and the Shoshone and Burley BLM Districts continues to be excellent. A close working relationship with Shoshone BLM, including backup from their helicopter helped coverage during the season. They continue to work closely with training, helitack, and the Interagency Class II Team.

An excellent cooperative effort exists between the Idaho Falls District BLM and the **Targhee National Forest**. Information and resources continue to be shared during draw down on the units. The Idaho Falls BLM continues to add Targhee fire danger messages in with their weekly news releases to the media.

U.S. Sheep Experiment Station employees continue to work with the Dubois District in keeping their employees trained and available for local fire suppression.

The Interagency Fire Control Center at West Yellowstone responded to 17 individual requests for fire suppression assistance.

Two Sierra Front Teams were again formed under the Incident Command System to function as class II teams for fires along the Reno-Carson City area. Both teams were interagency.

The Eastlake Interagency Communication Center had a new member this year with the Lake Tahoe Basin Management Unit joining the **Toiyabe National Forest**, Bureau of Land Management Carson District, and the Nevada Division of Forestry.

The Bridgeport Helicopter Program is interagency with the Bakersfield BLM.

In the southern part of the Forest (Las Vegas Ranger District) emphasis was placed on improving cooperation with the Las Vegas City Fire Department, North Las Vegas City Fire Department, Clark County Fire Department, National Park Service, Nevada Division of Forestry and Bureau of Land Management. It is expected that a Class II team will be established with these agencies.

Organization of a Mutual Aid Organization for Wasatch County, Wasatch-Cache National Forest, Utah State Lands and Forestry, Utah State Parks for cooperation in wildland urban interface problems, improved training, and coordination in emergency situations in Wasatch County. One tabletop exercise was held with Federal, State and County personnel.

In addition to the **Uinta National Forest** Fire academy training, three additional training sessions were held in cooperation with the Utah County Fire Marshall. In these sessions 45 people were trained which included people from Timpanogos Cave National Monument, local cities, and county volunteers.These trainees allowed the assembly of crews which included firefighters from city departments, the Park Service, and Utah, Wasatch, and Juab counties.

Alpine city cooperated in having the guilty parties of the Three Mines fire work as part of their restitution in cooperation with the Forest.

Orem, Springville, Spanish Fork, Provo, and many other local city fire departments have worked with the Forest Service to get their people trained in positions. These people were used in overhead and trainee positions on several fires.

The cooperative effort among the Bureau of Land Management, **Wasatch-Cache National Forest**, National Weather Service, and the Division of State Lands and Forestry continued in 1989.

The Division of State Lands and Forestry continued to provide a manager for the Interagency Fire Center. All the agencies cooperated in putting on the Interagency Fire Training sessions this spring.

Because of Interagency cooperation 3 Class Two teams were dispatched this season by the Bureau of Land Management, State Office.

CUMULATIVE FIRE REPORT

REGION 4

PERIOD:010189 THRU 123189

NUMBER OF FIRES

ACRES BURNED

SIZE CLASS (ACRES)	LIGHT NING	PERSON CAUSED	TOTAL FIRES	NATIONAL FOREST	OTHER INSIDE	TOTAL ACRES
A (.25 OR LESS)	809	162	971	899	2	901
B (.26 - 9)	460	59	519	614	23	637
C (10 - 99)	54	17	71	1944	220	2164
D (100 - 299)	13	3	16	2471	270	2741
E (300 - 999)	6	4	10	5960	260	6220
F (1000 - 4999)	16	6	22	39668	1490	41158
G (5000 +)	10	1	11	111049	5075	116124
P (PRESC. FIRE)	15	3	18	6197	0	6197
TOTAL	1383	255	1638	168802	7340	176142

STATISTICAL CAUSE	NUMBER FIRES	ACRES BURNED
LIGHTNING	1383	159740
EQUIPMENT USE	9	5782
SMOKING	31	289
CAMPFIRE	94	4919
DEBRIS BURNING	22	540
RAILROAD	1	0
ARSON	8	4063
CHILDREN	9	2
MISCELLANEOUS	81	807
TOTAL	1638	176142

NUMBER OF WILDFIRES BY STATISTICAL CAUSE

		PERSON CAUSED									
Forest	ST	Lightning	Equip ment	Smok ing	Camp fire	Debris burn	Rail road	Arson	Child ren	Misc	Total
ASHLEY	UT	29	3	0	3	2	0	1	0	3	41
BOISE	ID	271	1	8	8	4	0	0	3	10	305
BRIDGER-TETON	WY	29	0	5	11	0	0	0	0	2	47
CARIBOU	ID	13	0	0	0	0	0	0	0	8	21
CHALLIS	ID	72	0	0	6	6	0	0	0	0	84
DIXIE	UT	74	0	0	0	0	0	0	0	29	103
FISHLAKE	UT	54	2	1	2	0	0	0	2	0	61
HUMBOLDT	NV	17	0	0	1	0	0	2	0	2	22
MANTI-LASAL	UT	69	0	0	0	1	0	0	0	3	73
PAYETTE	ID	375	0	1	5	2	0	1	0	1	385
SALMON	ID	122	0	0	8	2	0	0	0	1	133
SAWTOOTH	ID	62	0	4	12	2	0	1	0	2	83
TARGHEE	ID	48	0	2	6	0	0	1	0	2	59
TOIYABE	NV	65	2	4	9	1	0	1	0	7	89
UINTA	UT	64	1	3	8	0	0	1	3	1	81
WASATCH	UT	19	0	3	15	2	1	0	1	6	47
TOTAL		1383	9	31	94	22	1	8	9	81	1638

NUMBER OF ACRES BURNED BY STATISTICAL CAUSE

PERSON CAUSED

Forest	ST	Lightning	Equip ment	Smok ing	Camp fire	Debris burn	Rail road	Arson	Child ren	Misc	Total
ASHLEY	UT	4,413	5,478	0	0	3	0	0	0	5	9,901
BOISE	ID	100,565	1	262	2	406	0	0	0	83	101,319
BRIDGER-TETON	WY	55	0	2	3,478	0	0	0	0	7	3,543
CARIBOU	ID	7	0	0	0	0	0	0	0	0	7
CHALLIS	ID	1,518	0	0	9	3	0	0	0	0	1,530
DIXIE	UT	8,775	0	0	0	0	0	0	0	234	9,009
FISHLAKE	UT	377	300	0	0	0	0	0	0	0	677
HUMBOLDT	NV	20	0	0	0	0	0	4,049	0	200	4,269
MANTI-LASAL	UT	129	0	0	0	0	0	0	0	0	129
PAYETTE	ID	39,081	0	0	25	52	0	0	0	0	39,158
SALMON	ID	1,192	0	0	3	45	0	0	0	160	1,400
SAWTOOTH	ID	2,751	0	20	17	27	0	1	0	58	2,874
TARGHEE	ID	21	0	0	4	0	0	12	0	0	37
TOIYABE	NV	103	0	0	1	2	0	0	0	1	107
UINTA	UT	249	0	0	771	0	0	0	0	0	1,020
WASATCH	UT	486	0	5	609	2	0	0	1	59	1,162
TOTAL		159,740	5,782	289	4,919	540	0	4,063	2	807	176,142

NUMBER OF WILDFIRES BY SIZE CLASS
LIGHTNING CAUSED

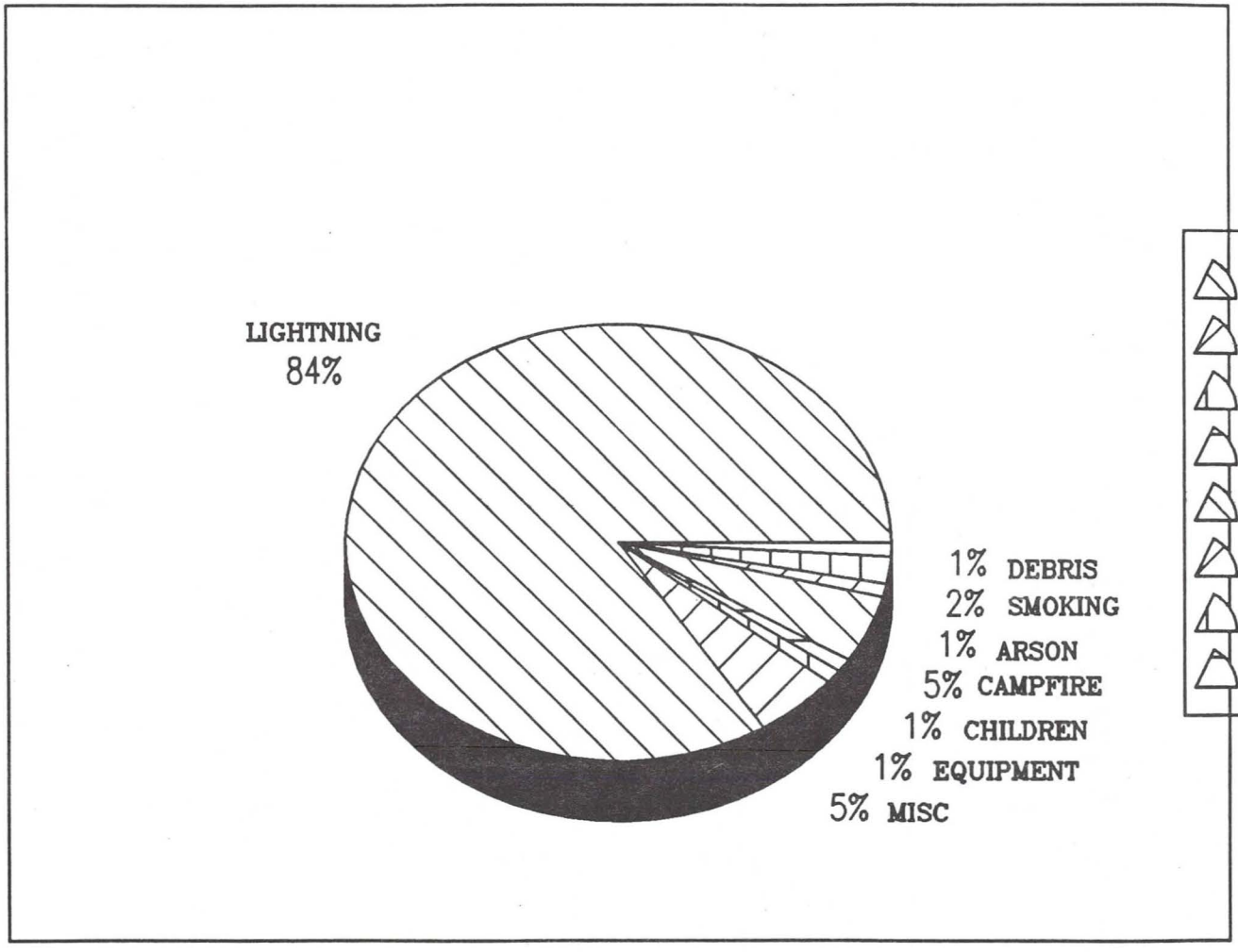
Forest	ST	Class A 0-.25	Class B .26-9	Class C 10-99	Class D 100-299	Class E 300-999	Class F 1000-4999	Class G over 5000	TOTAL
ASHLEY	UT	18	9	0	0	0	2	0	29
BOISE	ID	126	116	13	3	0	7	6	271
BRIDGER-TETON	WY	21	7	1	0	0	0	0	29
CARIBOU	ID	13	0	0	0	0	0	0	13
CHALLIS	ID	35	32	4	0	0	1	0	72
DIXIE	UT	72	0	0	0	1	0	1	74
FISHLAKE	UT	41	10	3	0	0	0	0	54
HUMBOLDT	NV	9	7	1	0	0	0	0	17
MANTI-LASAL	UT	34	32	3	0	0	0	0	69
PAYETTE	ID	222	109	13	5	4	4	3	375
SALMON	ID	37	83	0	1	1	0	0	122
SAWTOOTH	ID	38	17	3	3	0	1	0	62
TARGHEE	ID	39	9	0	0	0	0	0	48
TOIYABE	NV	52	12	1	0	0	0	0	65
UINTA	UT	41	13	10	0	0	0	0	64
WASATCH	UT	11	4	2	1	0	1	0	19

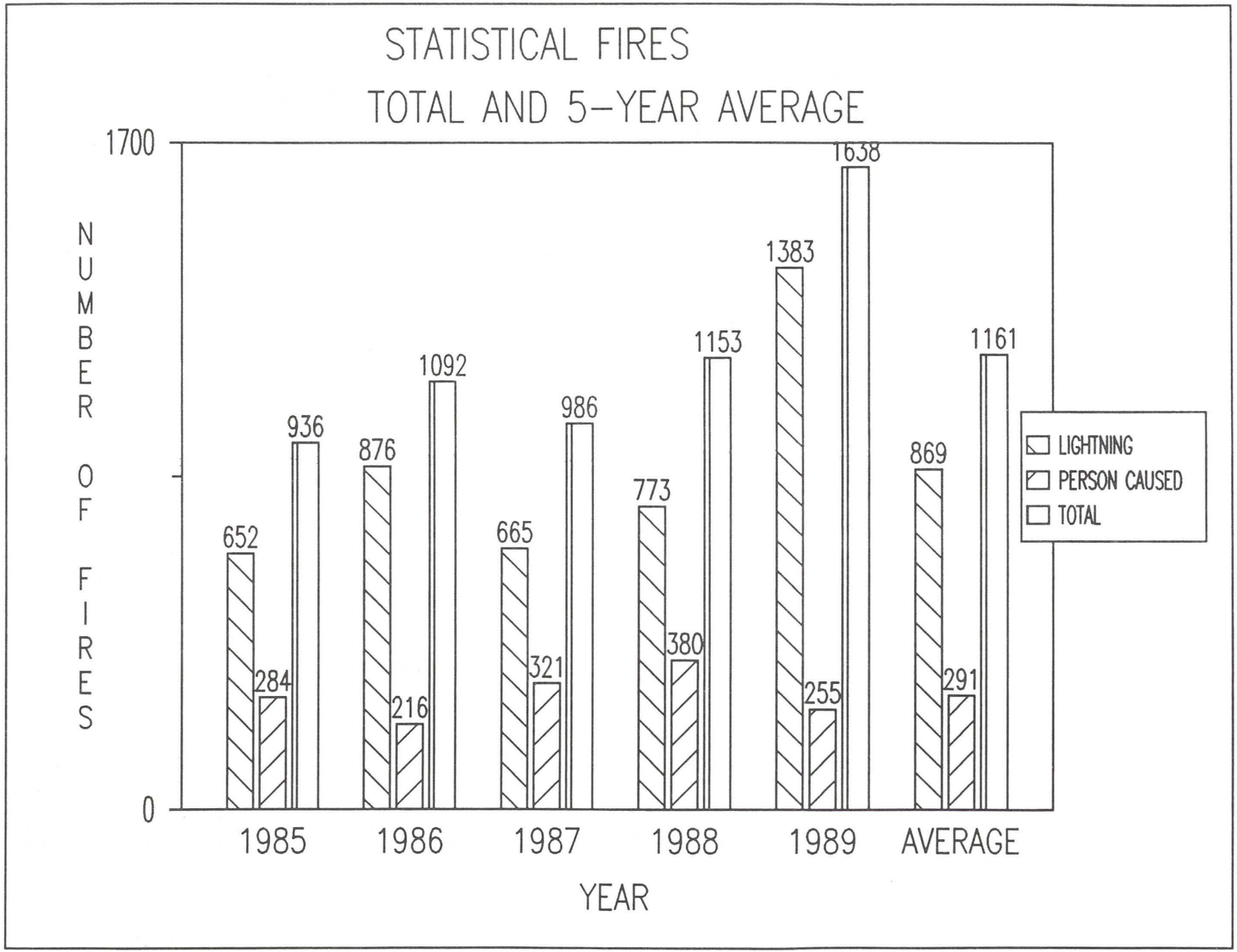
NUMBER OF WILDFIRES BY SIZE CLASS
PERSON CAUSED

Forest	ST	Class A 0-.25	Class B .26-9	Class C 10-99	Class D 100-299	Class E 300-999	Class F 1000-4999	Class G over 5000	TOTAL
ASHLEY	UT	6	5	0	0	0	0	1	12
BOISE	ID	15	11	3	3	0	1	4	34
BRIDGER-TETON	WY	11	6	0	0	0	1	0	18
CARIBOU	ID	8	0	0	0	0	0	0	8
CHALLIS	ID	7	4	1	0	0	0	0	12
DIXIE	UT	29	0	0	0	0	0	0	29
FISHLAKE	UT	4	2	0	0	1	0	0	7
HUMBOLDT	NV	1	1	0	2	0	1	0	5
MANTI-LASAL	UT	4	0	0	0	0	0	0	4
PAYETTE	ID	5	3	2	0	0	0	0	10
SALMON	ID	4	5	1	1	0	0	0	11
SAWTOOTH	ID	14	3	4	0	0	0	0	21
TARGHEE	ID	7	3	1	0	0	0	0	11
TOIYABE	NV	20	4	0	0	0	0	0	24
UINTA	UT	13	1	2	0	1	0	0	17
WASATCH	UT	13	11	3	0	1	0	0	28

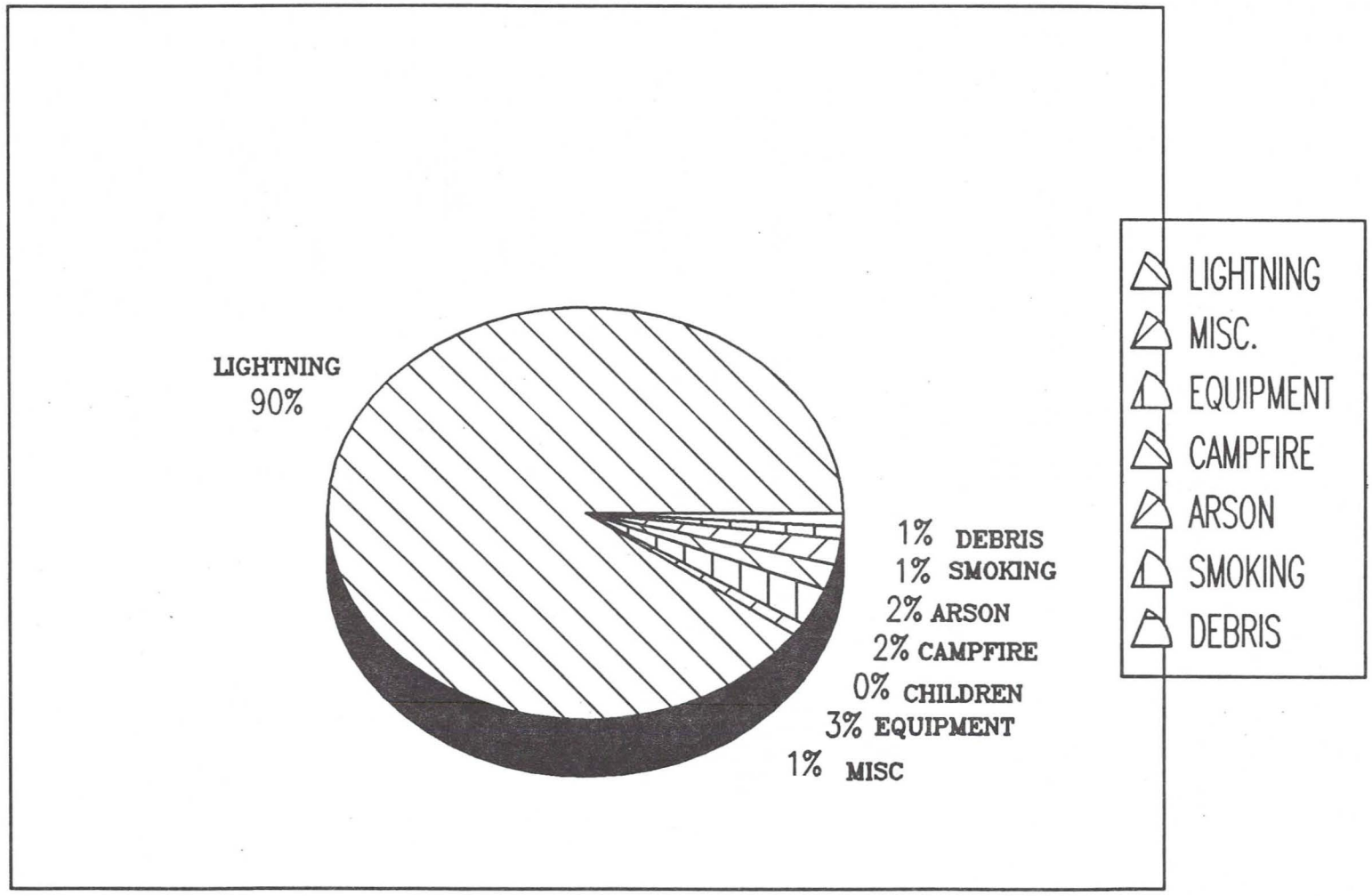
PERCENT OF 1989 FIRES BY CAUSE

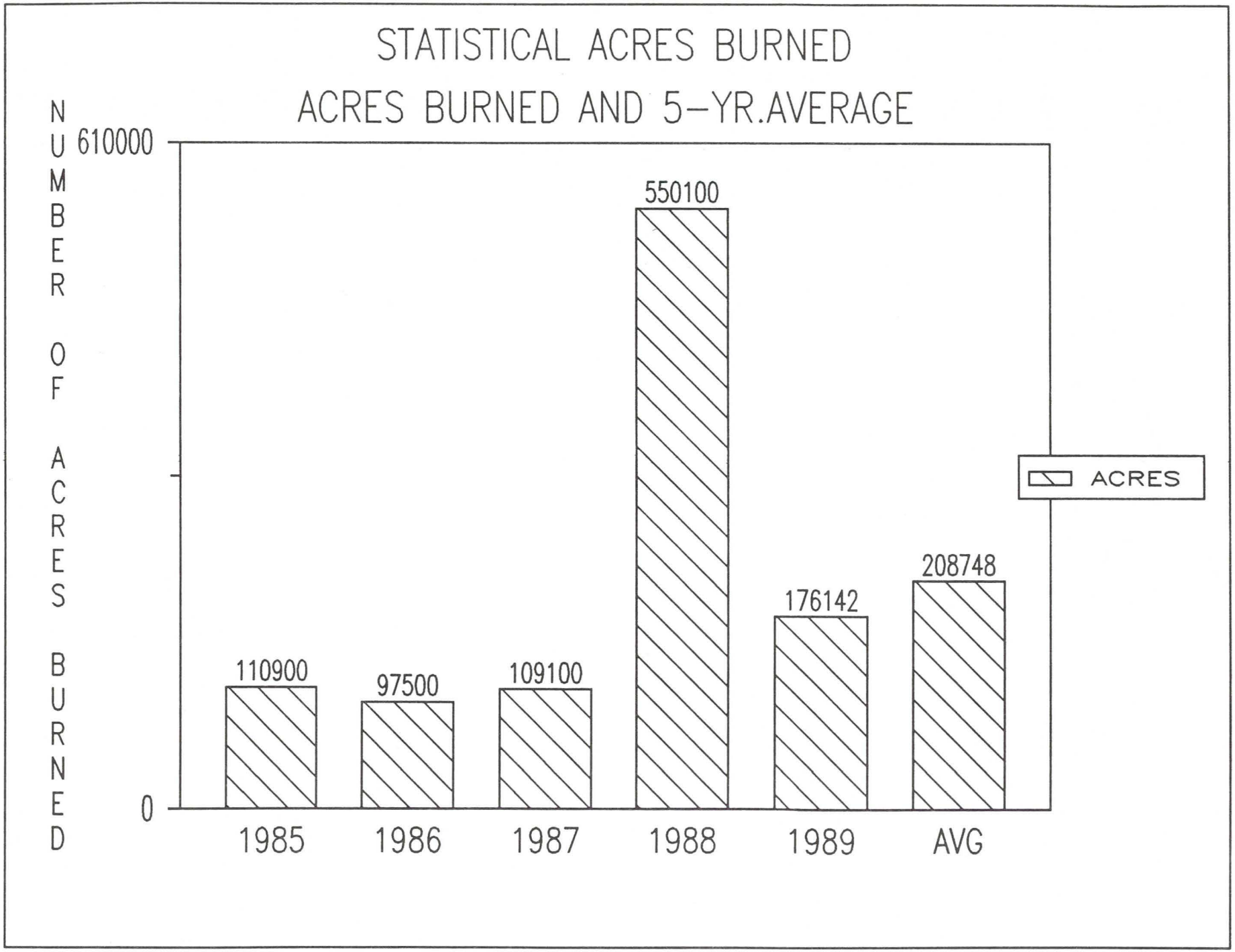
1,638 TOTAL FIRES




STATISTICAL FIRES
TOTAL AND 5-YEAR AVERAGE
1700
0
NUMBER OF FIRES
652
284
936
876
216
1092
665
321
986
773
380
1153
1383
255
1638
869
291
1161
LIGHTNING
PERSON CAUSED
TOTAL
1985
1986
1987
1988
1989
AVERAGE
YEAR

PERCENT OF 1989 ACRES BURNED
176,142 TOTAL ACRES




STATISTICAL ACRES BURNED
ACRES BURNED AND 5-YR.AVERAGE
NUMBER OF ACRES BURNED
610000
0
110900
97500
109100
550100
176142
208748
1985
1986
1987
1988
1989
AVG
ACRES

FIRE FIGHTING FUNDS
REGION 4 EXPENDITURES
(Paid by Region 4 as of 9/30/89)

Ashley National Forest	$1,845,750.25
Boise National Forest	$15,173,106.98
Bridger Teton National Forest	$1,338,457.53
Caribou National Forest	$456,605.68
Challis National Forest	$805,537.92
Dixie National Forest	$1,298,794.22
Fishlake National Forest	$409,252.43
Humboldt National Forest	$150,276.75
Manti-Lasal National Forest	$374,211.18
Payette National Forest	$8,462,754.15
Salmon National Forest	$1,328,845.93
Sawtooth National Forest	$929,726.61
Targhee National Forest	$1,332,022.97
Toiyabe National Forest	$1,269,824.99
Uinta National Forest	$505,321.90
Wasatch-Cache National Forest	$801,512.53
Regional Office	$1,738,895.87
TOTAL EXPENDITURES	**$38,220,897.89**

1989
PERSONNEL EMPLOYED ON FIRE MANAGEMENT ACTIVITIES

CATEGORY	NUMBER	
	SUB-TOTAL	TOTAL
1. Regular appointed personnel		
a. Full time fire protection	116	
b. Part time fire protection	133	
c. Others used on presuppression	149	
d. Others used on suppression	738	
TOTAL		1,136
2. Seasonal or short-term personnel		
a. Regular fire protection	507	
b.Others some time on fire protection work	1,320	
c. Emergency firefighters	4,757	
TOTAL		6,584
3. Number of casual employees on fire suppression		1,869
4. Casual employees hired for first time (included in Item 3)	1,103	
5. **GRAND TOTAL** (1e, 2d, 3)		9,589

2.c Doesn't include 550 reg Army troops on fire line.
3. figure includes 234 National Guard Personnel
984 Military Personnel-750 Regular Army-234 National Guard

DISABLED FIREFIGHTER (TARGHEE NATIONAL FOREST)

Steve DeRoche is a double amputee who wears two artificial legs and works as a firefighter on the Targhee National Forest. When DeRoche, now 32, is wearing a hard hat, toting a full backpack and carrying a 40 pound chainsaw and shovel, there's no evidence that his legs are amputated. He does not use crutches; heavy boots cover his artificial lower legs and feet.

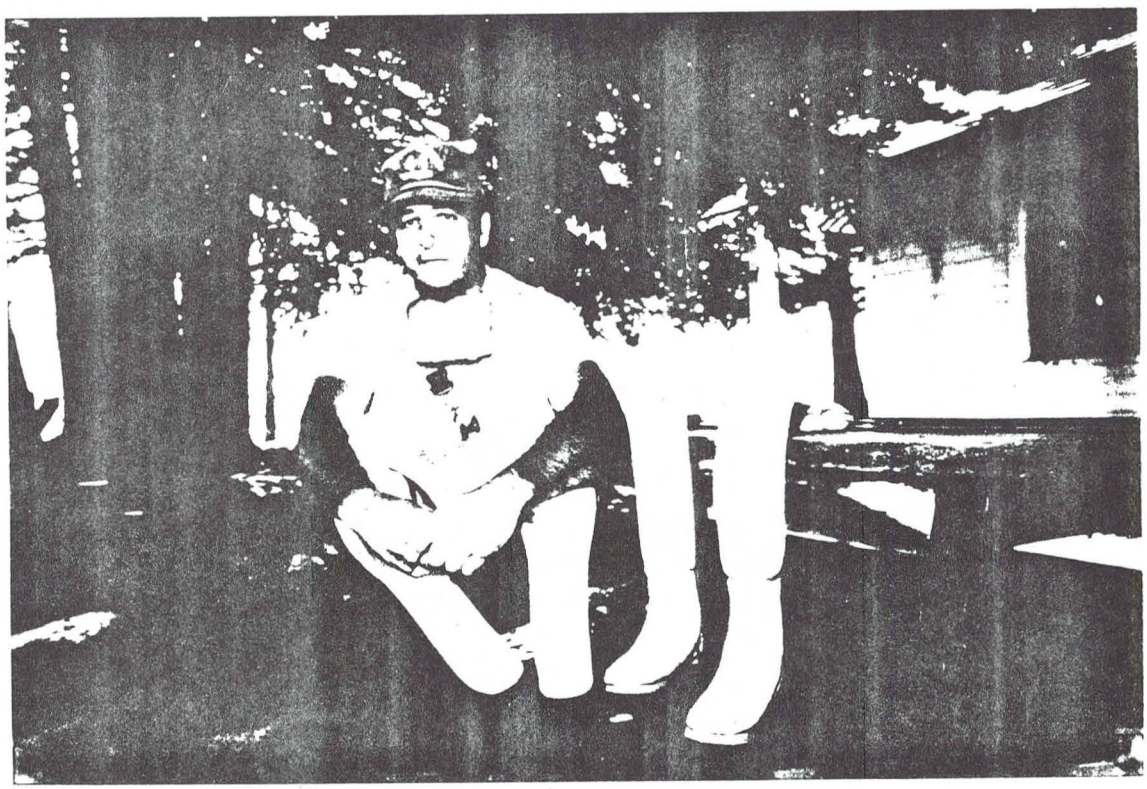
Most days, he does trail work, falls and clears trees, saws wood, packs gear and other odd jobs.

When fires break out, he works on the fire line when he isn't manning the fire engine, laying hose and operating the pumps, his main job.

DeRoche is confident he was hired because people believed he could do the job and the Forest Service has to agree.

He plans to return to Idaho State University this fall and continue work on his sociology degree.

Steve's story shows that disabled people can do difficult jobs if given the chance and have a real place in the world of fire.



SMOKEJUMPER AND HELITACK REPORT
REGION 4
1989

	SMOKEJUMPERS		HELITACK
ITEM	HOME REGION	FROM OTHER REGIONS	CREWMEN
1. Number of bases	1		8
2. Number of jumpers or crewman	69		58
3. Number of fires attacked or jumped			
a.Initial attack	136	118	379
b.Follow-up	14	15	291
c.Total	150	133	670
4. Number of person jumps to fires	538	450	47
5. Person-days on fires	2917	2811	2823

SMOKEJUMPER SUMMARY

The total number of jumpers at the McCall base this year was 69. This was one short of our goal of 70. This was a record year for fires jumped out of McCall of 939 fire jumps. The McCall base provided initial attack for 12 different forests, in 3 different regions. We at one time had a total of 167 jumpers at McCall from all bases in the nation including Alaska and Boise BLM, and jumped the base completely out on 14 different occasions. During the peak of the season, we had a R-5 rigging crew and a ramp manager, and hired 7 AD personnel for cargo chutes, fire packs, lawns, etc.

Total jumps made by McCall jumpers through 11-1-89 was 1,251.

1989 HELICOPTER OPERATIONS

The 1989 fire season was another high use year for helicopter operation. There were seven full service helicopter contracts in the Region. Due to funding levels and tremendous increase of contract bids, the dry-lease helicopter contract and one full-service contract were not awarded (both forests involved covered the peak of their seasons with type III call when needed helicopters.

A total of 119 helicopters (56 type III's, 24 type II's, 11 type I's and 28 military helicopters) operated for an approximate 10,000 hours. Call when needed (CWN) and exclusive use helicopters from the National Park Service, BLM, BIA and Forest Service Regions 1,3,4,5,6 and 8 were used on fires in this region. We do not yet have accurate data on 34 of the type III helicopters so an accurate cost figure can not yet be determined, however, it will be over eight million dollars.

The single largest challenge of 1989 was the management of the call when needed (CWN) and military helicopter operations. Qualified CWN modules and managers in adequate numbers continues to be a significant problem and should receive a high priority for the coming year.

We experienced three helicopter accidents during the season (two mechanical failures and one pilot judgement).

Region 4 initiated a new program in 1989 called helicopter cargo let-down. It consists of a spotter lowering small amounts of cargo (cubitainers, saw gas, food, radio batteries, etc.) from a hovering helicopter using a friction device and tubular nylon webbing attached to the cargo. We received approval from the WO to evaluate this program in 1989. There was not enough use during 1989 to thoroughly evaluate the program so we will continue the evaluation in 1990. No problems have been experienced with this program to date and it appears that it will be a valuable addition to the already versatile helicopter program.

The data below is accurate for the type II and type I helicopters used in the region. We don't have complete data for the type III's yet.

From 7/17/89 to 9/23/89, 24 type II helicopters flew in R-4 for a total of 1,836.8 hours at a total cost of $3,051,025.30; and, 11 type I helicopters flew a total of 861.2 hours at a total cost of $4,096,921.60.

ACCIDENT BRIEFS 1989

On January 26,1989, Region Four Beechcraft Baron 58P, N145Z, experienced an accident at the Salt Lake City Airport. The accident occurred when the pilot mistakeningly raised the landing gear handle instead of the wing flap switch, resulting in gear retraction during the landing roll-out. The aircraft skidded about 550 feet and came to rest approximately 3,550 feet from the approach end of the runway. There were no injuries.

On August 3, 1989, a call-when-needed helicopter Bell 206B III, N8113J, owned by Cascade Helicopters, crashed during a reconaissance mission on the Whangdoodle fire on the Payette National Forest. The helicopter was flying low and slow, and during a right turn lost tail rotor authority, due to the wind being in the critical azmuth area on the tail rotor, and spun down through the trees. There was insufficient altitude for recovery. The helicopter was destroyed, but there were no injuries.

On August 9, 1989, a call-when-needed helicopter, Hughes 500D, N58247, owned by Hawkins and Powers, crashed on a small mountain road, during the Lowman fire, on the Boise National Forest. During the narrated infrared videotape mission along the fire line, the engine lost power, and the pilot had to autorotate to the road. Because the helicopter rotor hit a tree during the approach, the helicopter crashed and was destroyed. The power lost was caused by a fractured PC line to the fuel control. There were no injuries.

On August 14, 1989, a call-when-needed helicopter, Bell 205A-1, N58087, owned by Evergreen Helicopters, experienced engine compressors stalls, during water bucket operations. Since there was no landing spot available, the pilot flew a short distance, where the pilot was forced to autorotate to a helispot. The aircraft landed short and hard, spreading the landing skids. The aircraft remained up-right. The compressor stalls, which resulted in failure of the engine stemmed from a combination of conditions existing prior to and during the mishap flight. There were no injuries.

AIRCRAFT USE REPORT

INCLUSIVE DATES: 100188-093089 ALL FORESTS AND REGIONAL OFFICE

TYPE OF USE	HOURS FLOWN FS-OWNED	CON-TRACT	TOTAL	H"COPTER
AVIATION MANAGEMENT ACTIVITIES				
AIRCRAFT, PILOT, UNIT INSPECTIONS	8.70	27.80	36.50	1.50
PILOT TRAINING AND PROFICIENCY	122.20	.50	122.70	7.60
AIRCRAFT MAINTENANCE-TEST FLIGHT	34.60	.00	34.60	.20
OTHER	35.40	.00	35.40	.00
TOTAL	200.90	28.30	229.20	9.30
TOTAL HOURS 238.50				
FIRE SUPPRESSION ACTIVITIES				
PERSONNEL TRANSPORT	155.90	2291.88	2447.78	808.00
RECONNAISSANCE	2.00	737.08	739.08	204.60
DETECTION	2.00	196.22	198.22	7.60
AIR ATTACK	.00	393.43	393.43	8.10
LEAD PLANE	366.90	50.60	417.50	.00
RETARDANT/WATER DELIVERY	.00	171.01	171.01	387.80
SMOKEJUMPER TRANSPORT	601.70	23.70	625.40	.00
HELITACK	.00	.00	.00	339.10
RAPPELLER TRANSPORT	.00	.00	.00	.CO
EQUIPMENT/SUPPLY TRANSPORT	57.30	105.40	162.70	277.00
INFRARED PHOTOGRAPHY	2.20	.00	2.20	22.30
AERIAL IGNITION	.00	.00	.00	2.40
OTHER	.70	8.40	9.10	12.60
TOTAL	1188.70	3977.72	5166.42	2069.50
TOTAL HOURS 7235.92				
OTHER ACTIVITIES				
PERSONNEL TRANSPORT	435.60	883.26	1318.86	244.80
SURVEY/OBSERVATION	7.00	49.07	56.07	90.10
FERRY	55.10	95.45	150.55	47.20
ANIMAL/WILDLIFE COUNT	.00	8.63	8.63	6.50
SEARCH AND RESCUE	.00	.00	.00	17.50
LAW ENFORCEMENT/INVESTIGATIONS	.00	2.10	2.10	.20
RESEARCH	.00	.00	.00	.00
AIR QUALITY MONITORING	.00	.00	.00	3.10
FIRE PREVENTION	.00	.00	.00	.00
PRESCRIBED BURNING	.00	3.48	3.48	43.10
CARGO TRANSPORT HAZARDOUS MATERIALS	.00	8.00	8.00	2.20
CARGO TRANSPORT	33.10	49.20	82.30	113.50
AERIAL PHOTOGRAPHY	172.30	2.30	174.60	4.40
INFRARED PHOTOGRAPHY	.00	.00	.00	.00
AERIAL IGNITION	.00	.00	.00	13.60
ACCIDENT INVESTIGATIONS	.00	.00	.00	.00
OTHER	7.00	.00	7.00	9.20
TOTAL	710.10	1101.49	1811.59	595.40
TOTAL HOURS 2406.99				
COLUMN TOTAL	2099.70	5107.51	7207.21	2674.20
GRAND TOTAL HOURS 9881.41				

AIRCRAFT USE REPORT

INCLUSIVE DATES: 100188-093089 *REGIONAL OFFICE*

TYPE OF USE	HOURS FLOWN FS-OWNED	CON-TRACT	TOTAL	H"COPTER
OTHER ACTIVITIES				
AVIATION AND FIRE MANAGEMENT	223.40	404.47	627.87	275.00
ADMINISTRATIVE MANAGEMENT	7.10	99.00	106.10	21.40
ADMINISTRATIVE SERVICES	8.90	27.89	36.79	12.70
CIVIL RIGHTS	.00	.00	.00	.00
COMPUTER SERVICES	5.10	1.80	6.90	2.90
ENGINEERING	163.60	22.50	186.10	12.80
EXPERIMENT STATIONS	30.10	4.40	34.50	.00
FISCAL AND ACCOUNTING MANAGEMENT	4.80	25.80	30.60	.00
FOREST PEST MANAGEMENT	6.30	.00	6.30	17.50
HUMAN RESOURCE PROGRAMS	.00	.00	.00	.00
LANDS	8.50	4.60	13.10	4.20
LAND MANAGEMENT PLANNING	8.10	14.40	22.50	4.00
LAW ENFORCEMENT	.00	25.90	25.90	6.90
MINERALS AND GEOLOGY	6.60	34.50	41.10	3.60
OFFICE OF GENERAL COUNCIL	.00	.00	.00	.00
OFFICE OF INFORMATION	9.40	9.00	18.40	.00
PERSONNEL MANAGEMENT	7.20	9.80	17.00	.00
PROGRAM PLANNING AND BUDGET	19.40	37.34	56.74	.00
RANGE MANAGEMENT	31.20	9.70	40.90	69.00
RECREATION MANAGEMENT	15.90	193.21	209.11	15.80
REGIONAL FORESTER/FOREST SUPERVISOR	49.60	78.26	127.86	.00
STATE AND PRIVATE FORESTRY	3.30	6.30	9.60	.00
TIMBER MANAGEMENT	25.70	57.32	83.02	48.10
WATERSHED AND AIR MANAGEMENT	4.30	1.90	6.20	9.10
WILDLIFE MAMAGEMENT	23.10	13.30	36.40	71.40
OTHER AGENCIES AND COOPERATORS	22.60	.00	22.60	6.10
OTHER	25.90	20.10	46.00	14.90
TOTAL	710.10	1101.49	1811.59	595.40

TOTAL HOURS 2406.99

NUMBER OF PASSENGERS TRANSPORTED

FIXED-WING	HELICOPTER
3169	1966

CARGO AND MATERIAL DROPPED

PARACARGO	175597
AIR FREIGHT	843934
SLING	518228
HELITORCH	1880
RETARDANT	467069
WATER	334070

NUMBER OF PASSENGERS TRANSPORTED

	FIXED-WING	HELICOPTER
FIRE	6046	6892
OTHER	3246	1969

INSIDE FOREST SERVICE PROTECTION BOUNDARIES

PROTECTED BY THE FOREST SERVICE

State and Private Land
(Include county and municipal land)

Forest	State	Fee Basis	Offset Basis	Reimbursement Suppression Cost only	Without reimbursement	Other Federal Land	National Forest Land	Total	Under Mutual assistance agreements	National Forest Land Protected by others
ASHLEY	UTAH WYOMING				21,685 480		1,285,437 91,959	1,307,122 92,439	 8,624	
BOISE	IDAHO	125,995	69,000			23,440	2,054,417	2,272,852		115,413
BRIDGER TETON	WYOMING			40,086			3,412,541	3,452,627		
CARIBOU	WYOMING UTAH IDAHO	 22,153					6,948 6,955 1,081,128	6,948 6,955 1,103,281		
CHALLIS	IDAHO	9,012			8,328		2,514,974	2,532,314		
DIXIE	UTAH						1,884,468	1,884,468	83,444	
FISH-LAKE	UTAH						1,424,479	1,424,479		
HUM-BOLDT	NEVADA				148,692		1,369,396	1,518,088	105,525	1,100,000
MANTI LASAL	UTAH COLORADO					640	1,307,188 27,105	1,307,828 27,105	79,619	32,000
SAW-TOOTH	IDAHO UTAH	10,850	 8,591		20,867		2,067,608 63,703	2,099,325 72,294		 3,680
TARGHEE	IDAHO WYOMING					18,235	1,516,717 331,249	1,534,952 331,249	50,516 2,440	
TOIYABE	CALIF NEVADA	134,264			 14,730	 391	634,424 3,216,166	768,688 3,231,287	16,260 61,786	 78,046
UINTA	UTAH				9,803	25,800	731,035	766,638	69177	81,755
WASATCH CACHE	UTAH WYOMING	5,487	25,690		31,493 420	178,000	1,260,137 37,762	1,500,807 38,182		58,085
TOTALS		450,233	180,021	40,086	256,498	435131	30,008,854	31,370823	577,735	1,881,411

60 YEAR FIRE STATISTICS

YEAR	LIGHTNING FIRES	HUMAN FIRES	TOTAL FIRES	CLASS A	CLASS B	CLASS C	CLASS D	CLASS E	ACRES BURNED LIGHTNING	ACRES BURNED HUMAN	ACRES BURNED TOTAL
1930	602	354	956	637	192	79	20	28	67,106	29,778	96,884
1931	664	451	1115	724	256	84	19	32	97,854	31,814	129,668
1932	264	252	516	346	124	26	12	8	6,417	8,872	15,289
1933	303	266	569	308	157	86	7	11	9,147	20,466	29,613
1934	599	307	906	519	250	102	14	21	26,394	79,290	105,684
1935	548	327	875	592	139	98	19	27	25,646	22,942	48,588
1936	617	259	876	661	145	41	5	24	21,309	26,267	47,576
1937	573	336	909	714	142	47	2	4	3,745	5,417	9,162
1938	1025	458	1483	1246	182	39	6	10	3,854	16,612	20,466
1939	816	374	1190	822	218	128	8	14	12,955	21,710	34,665
1940	888	431	1319	864	310	91	21	33	26,512	45,985	72,497
1941	399	137	536	417	70	30	11	8	1,165	6,685	7,850
1942	489	243	732	487	146	62	16	21	22,302	46,729	69,031
1943	392	165	557	381	118	35	9	14	12,145	9,483	21,628
1944	363	245	608	388	123	48	20	29	4,445	34,131	38,626
1945	276	127	403	271	82	28	11	11	27,957	6,894	34,851
1946	577	261	838	609	162	40	15	12	3,465	14,194	17,659
1947	471	228	699	427	176	46	18	32	23,649	63,158	86,807
1948	261	293	554	349	121	49	17	18	8,174	30,459	38,633
1949	687	198	885	656	178	23	10	18	37,652	15,303	52,955
1950	415	183	598	420	129	35	8	6	2,444	5,916	8,360
1951	401	188	589	437	99	36	8	9	2,473	6,432	8,905
1952	355	295	650	468	143	28	6	5	494	3,816	4,310
1953	647	257	904	672	175	39	10	8	3,941	3,703	7,644
1954	430	232	662	785	124	40	6	7	634	6,246	6,880
1955	359	156	515	408	77	22	5	3	1,158	9,703	10,861
1956	621	266	887	634	197	32	16	8	3,154	4,486	7,640
1957	515	167	682	514	123	29	5	11	6,504	21,805	28,309
1958	647	374	1021	765	172	57	15	12	2,339	8,098	10,437
1959	566	254	820	624	134	31	12	19	7,697	5,541	13,238
1960	721	344	1065	767	200	53	25	20	25,264	22,063	47,327
1961	804	235	1039	812	145	45	16	21	11,801	30,234	42,035
1962	719	324	1043	811	163	49	16	4	1,739	5,651	7,390
1963	804	242	1046	814	170	45	8	9	6,065	3,701	9,766
1964	484	403	887	668	166	26	16	11	13,956	11,808	25,764
1965	384	154	538	426	85	22	4	1	722	1,257	1,979
1966	1011	329	1340	1012	232	50	21	25	52,142	9,232	61,374
1967	747	142	889	741	125	19	3	1	965	675	1,640
1968	687	176	863	694	128	28	7	6	3,254	2,382	5,636
1969	485	207	692	578	91	21	1	1	1,448	562	2,010
1970	788	231	1019	833	146	35	2	3	793	2,902	3,695
1971	604	350	954	756	145	38	7	8	2,505	9,187	11,692
1972	1233	333	1566	1264	239	47	7	9	12,111	3,122	15,233
1973	787	370	1157	953	162	23	8	11	4,037	4,821	8,858
1974	572	523	1095	859	176	41	9	10	4,294	12,806	17,100
1975	608	298	906	767	122	15	1	1	724	798	1,522
1976	657	424	1081	897	138	31	7	8	3,072	4,338	7,410
1977	885	332	1217	987	185	32	5	8	3,048	11,643	15,141
1978	528	419	947	755	150	27	9	6	3,615	3,625	7,240
1979	684	534	1218	958	203	36	5	15	52,876	87,416	140,292
1980	557	312	869	716	118	19	7	9	1,093	11,631	12,724
1981	865	412	1277	963	223	47	15	29	91,127	47,411	138,535
1982	459	220	679	533	122	17	4	3	552	2,164	2,716
1983	374	170	544	429	78	23	7	7	1,795	4,634	6,429
1984	525	167	692	584	85	12	5	6	2,436	31,341	33,777
1985	652	284	936	715	156	42	6	17	104,141	6,737	110,878
1986	876	216	1092	665	314	64	15	14	80,621	16,852	97,473
1987	665	321	986	653	242	46	13	32	70,977	38,141	109,118
1988	773	380	1153	668	338	76	23	48	362,604	187,577	550,181
1989	1383	255	1638	971	519	71	16	10	159,740	16,402	176,142